

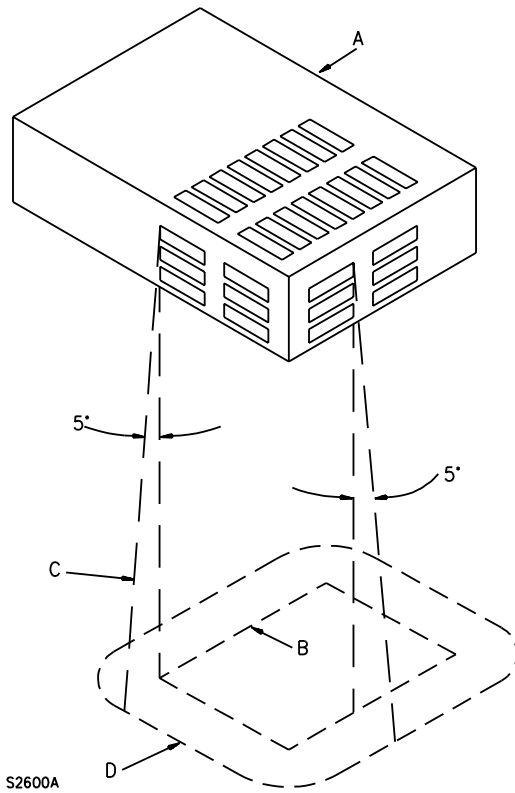
#### 4.6.2 Bottoms of fire enclosures

The bottom of a FIRE ENCLOSURE, or individual barriers, shall provide protection under all internal parts, including partially enclosed components or assemblies, which, under fault conditions, could emit material likely to ignite the supporting surface.

NOTE See 4.7.2.2 for parts that do not require a FIRE ENCLOSURE.

The bottom or barrier shall be located as, and no smaller in area than, indicated in figure 4E and be horizontal, lipped or otherwise shaped to provide equivalent protection.

An opening in the bottom shall be protected by a baffle, screen or other means so that molten metal and burning material are unlikely to fall outside the FIRE ENCLOSURE.



- A The portion of a component under which a FIRE ENCLOSURE is required, for example, under those openings in a component or assembly through which flaming particles might be emitted. If the component or assembly does not have its own FIRE ENCLOSURE, the area to be protected is the entire area occupied by the component or assembly.
- B The outline of the area A projected vertically downward onto the horizontal plane of the lowest point of the FIRE ENCLOSURE.
- C Inclined line that traces an outline D on the same plane as B. Moving around the perimeter of the outline B, this line projects at a 5° angle from the vertical at every point round the perimeter of the openings in A and is oriented to trace out the largest area.
- D Minimum outline of the bottom of the FIRE ENCLOSURE. A portion of the side of a FIRE ENCLOSURE which is within the area traced out by the 5° angle is also considered to be part of the bottom of the FIRE ENCLOSURE.

**Figure 4E – Typical bottom of a fire enclosure for partially enclosed component or assembly**

The requirements of 4.6.2 do not apply to:

- TRANSPORTABLE EQUIPMENT, which is covered by 4.6.4; or
- STATIONARY EQUIPMENT intended only for use in a RESTRICTED ACCESS LOCATION and to be mounted on a concrete floor or other non-combustible surface. Such equipment shall be marked as follows:

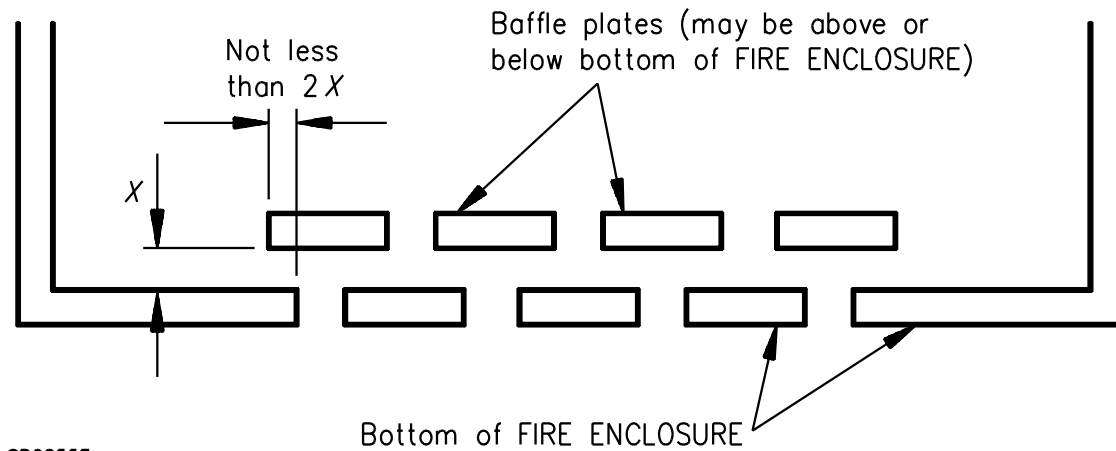
**SUITABLE FOR MOUNTING ON CONCRETE**

**OR OTHER NON-COMBUSTIBLE SURFACE ONLY**

*Compliance is checked by inspection and, where necessary, by the test of clause A.3.*

*The following constructions are considered to satisfy the requirement without test:*

- *no opening in the bottom of a FIRE ENCLOSURE;*
- *openings in the bottom of any size under an internal barrier, screen or the like, which itself complies with the requirements for a FIRE ENCLOSURE (see also 4.2.1);*
- *openings in the bottom, each not larger than 40 mm<sup>2</sup>, under components and parts meeting the requirements for FLAMMABILITY CLASS V-1, or FLAMMABILITY CLASS HF-1 or under small components which pass the needle-flame test of IEC 60695-2-2 using a 30 s flame application;*
- *baffle plate construction as illustrated in figure 4F;*
- *metal bottoms of FIRE ENCLOSURES conforming to the dimensional limits of any line in table 4C;*
- *metal bottom screens having a mesh with nominal openings not greater than 2 mm between centre lines and with wire diameters of not less than 0,45 mm.*



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Figure 4F – Baffle plate construction

Table 4C – Size and spacing of openings in metal bottoms of fire enclosures

Applicable to circular holes			Applicable to other shaped openings	
Metal bottom minimum thickness mm	Maximum diameter of holes mm	Minimum spacing of holes centre to centre mm	Maximum area mm <sup>2</sup>	Minimum spacing of openings border to border mm
0,66	1,1	1,7	1,1	0,56
0,66	1,2	2,3	1,2	1,1
0,76	1,1	1,7	1,1	0,55
0,76	1,2	2,3	1,2	1,1
0,81	1,9	3,1	2,9	1,1
0,89	1,9	3,1	2,9	1,2
0,91	1,6	2,7	2,1	1,1
0,91	2,0	3,1	3,1	1,2
1,0	1,6	2,7	2,1	1,1
1,0	2,0	3,0	3,2	1,0